## **ABSTRACT**

A lithographic projection apparatus is disclosed. The apparatus includes a radiation system that includes a radiation source and an illumination system that supplies a beam of radiation, and a support structure that supports a patterning structure. The patterning structure is configured to pattern the beam of radiation according to a desired pattern. The apparatus also includes a substrate support that supports a substrate, a projection system that projects the patterned beam onto a target portion of the substrate, an electrode, and a voltage source that applies an electric field between the radiation source and the electrode to generate a discharge between the radiation source and the electrode.